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Soil Conservation Service

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Assistance Available from the Soil Conservation Service

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Assistance Available from the Soil Conservation Service

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Mission of the Soil Conservation Service

The Soil Conservation Service (SCS) of the U.S. Department of Agriculture (USDA) helps individuals, groups, organizations, cities and towns, and county and State governments reduce the costly waste of land and water resources and put these national assets to good use. The guiding principle is the use and conservation treatment of the land in harmony with its capabilities and needs.

The SCS mission covers three major areas: soil and water conservation, natural resource surveys, and community resource protection and management. The help SCS provides is technical and in some cases financial. All assistance is given within the conservation objectives, guidelines, and priorities of USDA. SCS also provides some technical assistance to other countries.

To carry out its mission, SCS has a nationwide network of conservation specialists to help people understand and protect the land and water resources while they use them beneficially. The SCS staff includes soil conservationists, engineers, soil scientists, agronomists, biologists, economists, foresters, geologists, landscape architects, plant materials specialists, cartographers, environmental specialists, recreation specialists, social scientists, and archeologists.

SCS focuses its assistance on non-Federal land. Land users get help from SCS mainly through the nearly 3,000 locally organized and locally run conservation districts in the United States. At the district level, SCS conservationists provide onsite assistance and call upon all of the agency's expertise in solving specific problems of land users.

Equal opportunity in program delivery

SCS works hard to fulfill the intent of nondiscrimination laws and USDA's equal opportunity policies in program delivery. The Chief of SCS, State conservationists, National Technical Center directors, program managers, and supervisors at all levels are responsible for carrying out a comprehensive civil rights program to ensure program availability to all land users without regard to race, color, national origin, sex, age, religion, or handicap.

Specialty staff positions, such as equal opportunity liaison officers in all States and Technical Centers, and supportive actions, such as incorporating civil rights goals into each State's plan of operations, reflect the agency's commitment to achieving its mission in a nondiscriminatory manner. SCS supervisors and program managers at all levels have worked to develop plans and procedures to provide program outreach and opportunities for women, minorities, handicapped individuals, and others who have been underrepresented or excluded from mutual endeavors or benefits of SCS programs and services.

In the South, SCS is working with all the 1890 land-grant universities and with Tuskegee University to design and coordinate high-quality assistance to small-scale farmers, including limited resource farmers, enabling them to apply conservation measures within the limits of their resources. In some States, new programs and outreach efforts, such as demonstration projects, special studies regarding the effect of the Food Security Act of 1985 on limited resource farmers, displays, slide show presentations, and public addresses, are being used to publicize and extend available services.



An SCS soil conservationist inputs data gathered from the field into a computer. SCS is committed to equal opportunity in all of its areas of specialization.

SCS and conservation districts

Conservation districts are local units of government organized by local residents under State law. Districts operate on the premise that local people know more about local problems than anyone else. Consequently, the U.S. national soil and water conservation program is largely under local control.

The laws governing districts vary among States, but most are considered legal subdivisions of State or county government. Geographically, most districts follow county borders, although some cover parts of counties or two or more counties.

Under State law, each conservation district is responsible for soil and water conservation work within its boundaries. District governing boards are locally elected or appointed, and their job is to plan and carry out long-range programs based on the conservation work needed in their area. At the request of the district board, SCS assigns a district conservationist and a staff to provide technical assistance to the district and its cooperating land users.

To receive most kinds of SCS assistance, a land user, organization, or agency simply requests it. Usually, the land user signs a cooperative agreement with the district. Currently, there are more than 2 million district cooperators. SCS technical assistance through the conservation districts takes many forms:

- Onsite assistance to farmers, ranchers, foresters, and others in planning and carrying out a long-term conservation program that meets their needs and the needs of their land.



The partnership between SCS and conservation districts is important to the Nation's care of its soil and water resources. Here, an SCS employee shows district board members how a grassed waterway fits into a total management system.

- Information about alternative land uses and treatments for controlling erosion and reducing sedimentation, conserving water used in agriculture, and preventing flood damage in upstream areas.
- Assistance in designing, laying out, and checking the construction and maintenance of dams, terraces, and other structures; in selecting plant varieties, seeding methods and rates, and cultural practices for establishing grass or trees; and in solving problems that arise in managing cropland, pasture, woodland, wildlife habitat, and other land.
- Information about suitable crops for each kind of soil.
- Assistance in reclaiming abandoned surface-mined coal lands and other disturbed areas.
- Assistance to owners and operators of rural land in controlling sources of water pollution.
- Assistance to units of government in inventorying natural resources and planning their wise use.
- Interpretive information on the potentials and limitations of different kinds of soil for various uses. This information is useful to city and county officials, engineers, land use planners, developers, contractors, builders, water quality planners, and others.
- Assistance in planning and carrying out multicounty resource conservation and development programs.
- Assistance in environmental education programs and projects.

For certain conservation measures, SCS conservationists work closely with the USDA Agricultural Stabilization and Conservation Service and other Federal agencies to arrange cost sharing.

Natural resource surveys

Without accurate information on the extent and condition of the Nation's natural resources, a sound national conservation program would be impossible. To provide this information, SCS conducts soil surveys, snow surveys for water supply forecasting in the West, and surveys of other natural resources.

Soil surveys

SCS makes and publishes soil surveys, including maps of agricultural, forested, and built-up areas. These surveys form the basis of conservation planning. They are the joint effort of SCS, State agricultural experiment stations, and other Federal and State agencies participating in the National Cooperative Soil Survey Program. At the request of other agencies, SCS also prepares specialized maps and reports based on soil surveys.

Each soil survey describes the physical and chemical characteristics of the soils in the survey area—generally a county. It names and classifies the soils according to a nationwide system and provides information on the potential and limitations of the soils for various uses. Detailed maps show where each soil is located. In making the survey, soil scientists determine the soils' texture, structure, chemical composition, depth, slope, degree of erosion, and other features that affect their response to various uses and kinds of management.

The published soil surveys and the computerized files of soil survey data are important tools for planning the use and management of land and water resources. They are



An SCS soil scientist records on an aerial photo the boundaries of soils in a survey area. Field observations and data from laboratory tests and other sources help him to detect variations in soil properties that affect land use and management.

used by farmers and ranchers; city, county, State, and Federal agency personnel; and land use planners, engineers, contractors, developers, builders, and others.

Many city, county, and State governments have provided funds to accelerate soil survey work so that they can make better land use decisions. Soil surveys assist in planning roads and airports, reducing flooding, controlling sediment, developing housing and industry, protecting wildlife, establishing parks, or providing other environmental or economic benefits in the area.

Soils on more than 1.5 billion acres—about two-thirds of the Nation's land area—have been mapped, and the work is continuing at the rate of about 50 million acres per year. As a result, more than 1,600 soil surveys have been published.

Resources inventory

USDA conducts a program to inventory and monitor national resources in cooperation with other Federal, State, and local agencies, as prescribed by Section 302 of the Rural Development Act of 1972, the Soil and Water Resources Conservation Act of 1977 (RCA), and the Food Security Act of 1985. SCS has leadership of this program.

Through the program, SCS collects data on wind and water erosion, land use, land cover, prime and other important farmland, conservation practices and conservation treatment needs, pastureland and rangeland condition, flood prone areas, wetland systems, critical eroding areas, saline and alkaline areas, water areas, windbreaks, riparian areas, forest cover types, and urban and built-up land. SCS also produces seasonal reports on land and crops damaged by wind erosion in 541 counties in the Great Plains. The inventories help USDA appraise the condition of land and water resources and establish a national conservation program, as stipulated in the RCA and Food Security Act legislation.

Individuals, citizen groups, and units of government use SCS resource inventory information to make decisions on rural and community development; food, forage, and fiber production; soil and water conservation; rural energy use; retention of important farmlands; wetlands preservation; and environmental improvement.

Snow surveys and water supply forecasting

In the Western United States, most of the available water—for agriculture, domestic use, industry, and power—comes from snow that falls in the mountains. To find out how much water will be available in summer, snow surveyors from SCS and other agencies collect data from some 1,600 snow courses in the West several times each

winter. They determine the depth and the water equivalent of the snowpack and estimate the amount of runoff from the mountain watersheds.

In recent years, SCS has developed a network of automated radiotelemetry data sites for collecting snow survey data. The snow survey telemetry (SNOTEL) network provides SCS State offices with information on present streamflow potential. The information is especially valuable during periods of flood or drought. The information collected by the telemetry system and snow surveyors is translated into water supply forecasts that SCS State offices issue monthly from January to June in cooperation with the National Weather Service. Major sectors of the western economy—agriculture, industry, and recreation—base their plans on these forecasts.

Because of the difficulty of collecting snowfall data in remote areas, SCS conducts a rigorous snow survival course in which the men and women responsible for the snow surveys learn to survive should they become stranded in mountainous regions. On a space-available basis, SCS also trains individuals from other agencies, such as the Departments of Defense and Interior.



Snow survey teams collect data from snow course sites in the mountain ranges throughout the West. Snow depth, weight, and other data collected are compiled and analyzed to determine spring and summer melt-off.

Soil and water conservation

SCS provides technical assistance to individuals, groups, and units of government.

SCS assists landowners within conservation districts to develop and apply resource conservation systems to solve erosion, water quality, water conservation, and other resource condition problems on cropland, pastureland, woodland, rangeland, mined land, and other disturbed areas. It also helps landowners and operators conserve, manage, improve, and increase habitat for fish and wildlife.

SCS provides technical assistance to units of government on urban erosion, flooding, and on the protection of prime, important, and unique lands.

SCS operates plant material centers to make available new plant varieties useful in conservation work. It also helps educators design outdoor classrooms and incorporate conservation ideas into school curriculums and teacher training programs.

Cropland and pastureland

Through conservation districts, SCS conservationists provide information and onsite assistance to farmers on many practices that protect soil and water resources, such as conservation tillage, crop rotations, efficient fertilizer use, contouring, terracing, stripcropping, and crop residue use. They also help in managing pasture or hayland, establishing and maintaining grass waterways, treating critically eroding areas, and planning irrigation and drainage as needed.



Stripcropping and proper grazing management, planned with SCS help, conserve soil and water on this Wisconsin farm.

SCS agronomists and soil conservationists prepare technical standards and specifications for agronomic practices that fit the local soil, climate, and other physical conditions. They also provide technical assistance in solving special or unique agronomic problems, such as reclaiming surface-mined land for crops or pasture.

Rangeland

More than one-third of the Nation's non-Federal land area is privately owned rangeland, grazable woodland, and native pasture. This land is used mainly to produce forage for livestock. It also provides habitat for many kinds of wildlife, and the vegetation protects rangeland watersheds against erosion.

The objective of SCS on native grazing land is to help ranchers prepare and carry out a conservation plan for grazing use and management. By following this plan, the rancher can maintain or improve the production and quality of vegetation, ensure adequate returns on the investment in land and management, and maintain or improve wildlife habitat, watershed protection, and environmental quality.

SCS range conservationists help ranchers to identify, inventory, and evaluate their soil, water, plant, and animal resources; to choose the kinds of management and treatment that ensure best use of the resources; and to apply the planned conservation measures.



This SCS range conservationist is helping a rancher prepare a management plan for his livestock operation on the Great Plains.

Woodland

Nearly 60 percent of the Nation's commercial forest land is privately owned. SCS foresters and conservationists, working with conservation districts, assist owners and operators in planning the use of these woodland resources. SCS also provides assistance in planning and applying erosion control measures on these private forest lands. To serve the public more effectively, SCS coordinates its services with those of USDA's Forest Service, State forestry agencies, and others.

As part of the National Cooperative Soil Survey, SCS studies soil productivity to determine the relationship between tree growth and kinds of soil. Soil interpretations for woodland use and management are made, including those for site quality, adapted tree species, erosion hazard, equipment limitations, windthrow hazard, and seedling mortality.

SCS helps land users design, plant, and manage windbreaks to get the optimum benefits of controlling wind erosion, protecting farmsteads and making them more attractive, providing wildlife habitat, and reducing the amount of energy needed to heat or cool buildings.



Windbreaks on this farmland help to protect the soil from wind erosion and protect the farm buildings from high winds and drifting snow.

Water resources

SCS helps plan and design many practices that conserve water or improve water quality. Terracing and stripcropping enable soil to retain water and snow. Windbreaks trap blowing snow that later melts, providing moisture for plants in spring and summer and contributing to ground water supplies. Removing excess water in some kinds of soil is also important for sound water management and efficient crop production.

Irrigation is the biggest single consumptive use of water in the United States. To help farmers and ranchers irrigate efficiently, SCS provides technical assistance for improving irrigation systems and management. Soil surveys and snow surveys provide important information on which to base this assistance.

Soil conservationists help land users determine how much water to apply and when and how to apply it. They also plan and lay out concrete-lined irrigation ditches to eliminate seepage. Improved irrigation systems and management also improve water quality by reducing leaching and runoff.



Irrigation ditches lined with concrete and fields leveled with laser-guided equipment help to conserve water in the West.

SCS works to meet national goals for water quality by helping land users install conservation practices that control erosion, reduce runoff, and manage wastes. The practices improve water quality by reducing pollutants that can reach waterways—sediment, pesticides, nutrients, organic wastes, salts, leachates from saline soils, and mine tailings.

Organic wastes from farms and ranches are a major source of water pollution. SCS soil scientists, agronomists, engineers, and other specialists combine their knowledge to find beneficial uses for these wastes so that adverse effects on air, water, and soil are reduced. Well-designed systems for waste management depend on the interaction of soil, plants, micro-organisms, sunlight, and oxygen to break down waste materials and recycle nutrients. SCS helps plan, design, and install such systems for managing animal wastes, and it helps communities devise methods for recycling organic wastes through agricultural land.

In the arid West, SCS is working to reduce salinity in rivers, primarily by improving irrigation water management on farms. In the Colorado River Basin, for example, SCS is cooperating with USDA's Agricultural Stabilization and Conservation Service in the planning and installation of water management and salinity control practices. In Grand Valley, Colorado, and Uinta Basin, Utah, SCS is installing practices such as land leveling, concrete-based irrigation ditches, and structures for water control and measurement to help improve irrigation efficiency and reduce salt loading of the Colorado Basin.

Disturbed areas

SCS agronomists and other specialists help plan, establish, and manage vegetation on disturbed or critically eroding areas.

These areas include mined land, coastal sand dunes destroyed by people or the weather, construction sites, gullies, blowouts formed by severe wind erosion, and areas where floods have destroyed streambanks or cut new channels.

Disturbed areas need to be stabilized, vegetated, and protected against further erosion. Many can be reclaimed for farming, recreation, or other uses.



SCS helped reclaim this abandoned strip mine to reduce erosion.



Reshaping, reseeding, and streambank protection were among the methods used to restore the usefulness and attractiveness of the site.

Fish and wildlife

SCS conservationists and other specialists help farmers, ranchers, and other rural landowners establish and improve habitat for a variety of wildlife, including upland game, waterfowl, and fish. They help urban residents select shrubs and trees that attract songbirds, squirrels, and other wildlife.

Other SCS specialists provide technical assistance to individuals and firms engaged in aquaculture. They evaluate the suitability of the soils as sites for such facilities as ponds, reservoirs, and waste disposal systems, and they help design and lay out ponds and raceways. SCS biologists help land users with fish pond management, including advice on species selection, stocking rates, feeding, and maintaining water quality.



Mallards on Maryland's Eastern Shore benefit from well-managed habitat.

Environmental education

SCS provides assistance in environmental education by working with national educational associations, State and local departments of education, colleges and universities, youth and volunteer organizations and groups, and national, State, and local resource conservation organizations.

SCS conservationists help educators plan outdoor classrooms for environmental studies. They assist teachers and students who are studying environmental problems, such as nonpoint source pollution in a local stream. They help teachers find ways to incorporate conservation in subject areas throughout the school curriculum; for example, in courses of geography, mathematics, economics, political science, and history.

To help teachers establish environmental education programs, SCS participates in workshops and seminars; and assists such organizations as the General Federation of Women's Clubs, Boy Scouts, Girl Scouts, 4-H Clubs, and Future Farmers of America in preparing environmental education programs and community improvement projects. SCS also provides onsite technical assistance in developing and maintaining camp properties.



A popular stop along the SCS Conservation Trail at the '81 Boy Scout Jamboree was the soil profile building area. Under the guidance of an SCS conservation technician, Scouts built their own soil profiles and learned how to control soil erosion around their homes.

SCS works with textbook writers and producers of audiovisual materials to incorporate fundamental environmental principles into educational products.

Recreation

The demand for outdoor recreation within reach of population centers has grown rapidly in recent years. SCS and conservation districts are helping to meet this growing demand by designing small watershed projects and Resource Conservation and Development (RC&D) areas to include public facilities for swimming, boating, fishing, picnicking, and camping. Many other conservation measures contribute to recreation, including small ponds and lakes built to control erosion or increase water supplies on farms and ranches.

Recreation is likely to be part of a multiple-use plan for land and water resources. SCS helps land users plan for recreation on their land just as it helps them plan for crops, livestock, and timber. SCS has leadership in USDA for helping land users develop recreation resources, and it provides liaison with other Federal, State, and local agencies that assist in recreation development.

The kind of help that SCS gives depends on the type of enterprise planned by the land users but generally includes:

- Evaluating the suitability of the land for particular recreation enterprises and the conservation measures needed.



SCS technical specialists helped local residents plan this manmade lake used for recreation.

- Surveying the soils and determining their suitability for trees, shrubs, and grasses and their limitations for roads, building sites, septic tank absorption fields, water impoundments, trails, playgrounds, camp areas, picnic areas, wildlife habitat, and other uses.

Plant materials

More than 160 conservation plants released by SCS and cooperating agencies are in widespread use today—the result of continuing efforts by SCS to find plants that can help solve soil and water resource problems.

Conservation plants reduce erosion and sedimentation and help improve water quality in many areas. For example, they help stabilize shorelines, streambanks, and highway embankments; revegetate surface-mined lands; improve soil productivity; provide food and shelter for wildlife and livestock; and control erosion in heavily used recreation areas.

The search for conservation plants began in the mid-1930's, when SCS found that in many places, commercially available plants did not effectively control erosion.

Cooperating with State and other Federal agencies, SCS began evaluating native and introduced grasses, legumes, trees, and shrubs for specific conservation purposes.



A plant materials specialist examines smooth cordgrass seedlings at the National Plant Materials Center in Beltsville, Maryland. Cordgrass is being grown for shoreline stabilization.

SCS operates or provides technical assistance to 24 plant materials centers around the country. SCS State conservationists identify conservation needs and priorities, and scientists at the centers seek out native or introduced plants that show promise for meeting the needs. An example of a conservation priority is the need for improved varieties of trees for windbreaks in the Great Plains.

Researchers at the plant materials centers test and compare plant performance in greenhouses and in field trials under actual-use conditions. Then they arrange for commercial production of the plant. The centers do not sell plants and seed, but instead release their selections to commercial nurseries and seed producers. In so doing, the centers work closely with State and other Federal agencies, commercial firms, and seed and nursery associations.

The plant materials centers are open to the public. They are located in Palmer, Alaska; Tucson, Arizona; Lockeford, California; Meeker, Colorado (Upper Colorado Environmental Plant Center); Brooksville, Florida; Americus, Georgia; Hoolehua, Hawaii; Aberdeen, Idaho; Manhattan, Kansas; Quicksand, Kentucky; Beltsville, Maryland; East Lansing, Michigan; Coffeeville, Mississippi; Elsberry, Missouri; Bridger, Montana; Cape May Court House, New Jersey; Los Lunas, New Mexico; Big Flats, New York; Bismarck, North Dakota; Corvallis, Oregon; Kingsville, Texas; Knox City, Texas; Nacogdoches, Texas; and Pullman, Washington. Visitors are always welcome.

Cost-sharing programs for individual land users

To encourage and assist land users in protecting the Nation's natural resources, USDA offers cost sharing as well as technical assistance. SCS administers or participates in cost-sharing programs that provide special assistance for protecting the Great Plains, installing certain conservation practices, protecting wetlands for migratory waterfowl, reclaiming abandoned surface-mined coal land, and improving water quality.

Great Plains Conservation Program (GPCP). This program was authorized by Congress in 1956 primarily to protect the drought-prone Great Plains against wind erosion. SCS administers this program and offers technical assistance and cost sharing under 3- to 10-year contracts to farmers and ranchers installing permanent conservation practices. Cost-share rates range up to 80 percent for needed conservation work.

Top priorities in GPCP are treating highly erodible lands, converting land poorly suited to use as cropland back to grassland, reseeding depleted rangeland, and planting trees for wind protection. Cost-shared practices include stripcropping, terraces, diversions, fences, and stockwater systems. The program also offers assistance in improving recreation resources, promoting economic uses of land, and controlling agriculture-related pollution.

Assistance under GPCP is available to qualifying farmers and ranchers in 519 counties in Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming.

Agricultural Conservation Program (ACP). This program offers cost sharing for soil, water, and forestry practices of long-term benefit. It is administered by USDA's Agricultural Stabilization and Conservation Service (ASCS). SCS provides technical assistance in determining where conservation practices are practical and necessary, preparing the conservation plans, and designing and laying out the practices. SCS also supervises and certifies proper installation of the practices.

Assistance under ACP is available for farmers, ranchers, and private nonindustrial owners of forest land. The Federal Government pays up to 80 percent of the cost of needed conservation practices.

Water Bank Program. This program is designed to preserve, restore, and improve wetlands as breeding and resting areas for migratory waterfowl. SCS provides technical assistance in preparing and applying a 10-year contract for the landowner or operator in important waterfowl areas. ASCS administers the funds for cost sharing.

Rural Abandoned Mine Program (RAMP). Under RAMP, which was authorized by Congress in 1977, SCS provides technical and financial assistance to landowners

signing long-term contracts to reclaim certain abandoned coal-mined lands.

RAMP assistance is available in participating States to people who own or control non-Federal land that has been mined for coal. It is also available to owners of land and water areas affected by abandoned coal mines. Areas must have been abandoned before August 3, 1977, and left unreclaimed or inadequately reclaimed.

The first priority for assistance through RAMP is to protect public health, welfare, safety, and property from hazards caused by past surface coal mining or by surface effects of deep mining. Technical assistance and cost sharing offered through RAMP can be used to reclaim these lands for approved uses, which include pasture, range, woodland, cropland, noncommercial recreation, and wildlife habitat.

Under RAMP, the Federal share of the costs ranges from 25 to 100 percent, depending on the acreage to be reclaimed, the proposed use, and whether the benefits are mainly onsite (private) or offsite (public). The greater the public benefits, the more the Government will pay. A single landowner may receive cost sharing for reclaiming up to 320 acres. Funding for this program comes from the Abandoned Mine Land Fund, a special tax levied on current coal mining operations.

Community resource protection and development

SCS helps communities protect and develop their land and water resources. It helps solve flooding problems, assists when natural disaster strikes, and promotes community development.

This assistance not only results in better resource management, but also produces many social and economic benefits through improvement of community facilities, industrial development, commercial expansion, recreation, and strengthening of small farms.

Watershed projects

SCS administers watershed projects for USDA under Public Law 83-566, the Watershed Protection and Flood Prevention Act of 1954. These projects help urban and rural communities protect, improve, and develop the water and land resources of watersheds of up to 250,000 acres. PL 83-566 projects can be multipurpose.

Rural and urban residents in hundreds of communities have learned that by working together through watershed projects they can help solve their land use and water problems. They can:

- Reduce erosion, siltation, and flooding.
- Supply water for growing domestic and industrial needs.
- Attract new industries.
- Manage water for agriculture.
- Improve fish and wildlife resources.
- Provide opportunities for recreation.
- Recharge ground water reservoirs.
- Maintain and improve water quality.



Matajeek Dam, a multipurpose PL 83-566 structure in North Dakota, protects people and cropland from flooding and also provides recreation.

Watershed projects establish conservation measures on public and private land. Dams and other water control structures built on upstream tributaries ensure effective water management.

Watershed projects begin with local initiative and responsibility. Local proposals are reviewed by the State, which may make financial and other assistance available. Federal technical and financial assistance is also available.

State agencies and qualified nonprofit local organizations can sponsor a watershed project. Qualified local groups include soil and water conservation districts; municipalities; counties; recreation and park districts; watershed, flood control, conservancy, drainage, and irrigation districts; Indian tribes and tribal organizations; and associations of water users.

The Federal Government gives technical help in planning and installing the project measures, pays the full cost of construction for flood prevention, and shares the cost for other purposes. To help sponsoring organizations finance their share of the cost, it lends a maximum of \$10 million per project for a maximum of 50 years. To develop water supplies for future municipal or industrial use, the Government can advance funds amounting to a maximum of 30 percent of the costs of a multipurpose reservoir and can defer payment for a maximum of 10 years without interest.

Major obligations of local sponsors are acquiring land, easements, and rights-of-way; awarding contracts for construction on private land or electing to delegate



As part of the Palouse River Basin Study in eastern Washington and western Idaho, an SCS conservationist discusses fall field conditions with a landowner. A major objective of the Palouse study was to find alternative ways to reduce the severe erosion on much of the basin's cropland.

contracting to SCS; and sharing the construction cost of measures if appropriate. Local sponsors also are responsible for operating and maintaining the completed project.

Watershed projects stimulate economic growth in cities, towns, and rural areas. Where projects are developed for multiple purposes, both urban and rural areas benefit. Control of flooding, erosion, and siltation reduces risks in farming and lowers maintenance costs for roads and bridges. It also reduces reservoir sedimentation and prevents costly flood damage in urban communities.

Reservoirs built in watershed projects provide opportunities for fishing, boating, swimming, and other kinds of recreation. They supply water for irrigation, homes, and industry. They also help communities attract new industry and accommodate the expansion of existing industry.

A watershed project has an immediate and positive effect on the economy of a rural community and often acts as a catalyst to a wide range of rural development actions.

River basin studies and investigations

Public Law 83-566 also provides broad authority for USDA agencies and other Federal and State agencies to cooperate in river basin planning, surveys, and investigations. SCS directs these activities, working closely with USDA's Forest Service.

Conducted at the request of cooperating Federal and State agencies, river basin studies and investigations:

- Identify water and land resource problems.
- Analyze the economic base and environmental setting.
- Suggest alternative plans for solving problems and improving the economy and environment.

These studies and investigations allow engineers to plan resource development throughout a river basin. Rural upstream watershed projects can be coordinated with downstream measures to solve water and land use problems.

Cooperative studies provide information essential for planning alternative solutions to special resource problems. In Idaho, for example, they are used to identify resource problems. Local governments in Idaho can then apply State cost-sharing funds to improve conservation measures on erosive lands and increase the delivery efficiency of small irrigation systems. These special studies also facilitate the preparation of plans for improved water management that provide several benefits—water conservation, economic efficiency, and rural development—in addition to improved water quality. These studies are performed in cooperation with other USDA agencies and the appropriate Idaho State agencies.

SCS conducts flood plain management studies, which identify the economic, social, and ecological values of flood plains and opportunities for restoring and preserving them. These studies can identify flood prone areas. At the request of the local community, and with the approval of the appropriate State agency, SCS provides continuing technical assistance after completion of the study.

Resource conservation and development areas (RC&D)

The Resource Conservation and Development (RC&D) Program, approved by Congress in 1962, is designed to speed up resource development and environmental protection in multicounty areas. SCS is responsible for administering the program.

USDA agencies cooperate to help local sponsors plan and carry out an RC&D area program with assistance from State and other Federal agencies. To participate, local sponsors apply to the Secretary of Agriculture with the concurrence of the Governor and the SCS State conservationist. If the application is endorsed by the Governor and authorized by USDA, SCS may assign an RC&D coordinator to review with the sponsors the problems and opportunities for resource development and environmental protection. This study leads to a plan of action. USDA, if it accepts this plan, provides technical and financial aid to help carry it out.

Each RC&D area has its own goals, but most aim to:

- Develop land and water resources for agricultural, municipal, or industrial use and for recreation and wildlife.



Under the RC&D Program, SCS helps many of our Nation's coastal communities protect beaches and dunes with vegetation, such as the American beachgrass shown here, or with erosion-control structures.

- Provide information on better uses of soil and water resources for farming, ranching, recreation, housing, industry, transportation, and other land uses.
- Install conservation measures for critical-area treatment and flood prevention.
- Reduce air and water pollution.
- Make needed adjustments in land use by encouraging conversion of land to a suitable use; for example, conversion of steep cropland to woodland and wildlife habitat.
- Improve and expand recreation facilities and promote historic and scenic attractions.
- Increase local employment by encouraging existing industries to expand and new ones to locate in the area.
- Improve markets for crops, livestock, and forest products.
- Improve or bring to the area needed community facilities such as schools, hospitals, sewage treatment plants, and roads.
- Encourage training programs to improve job skills.
- Promote rural development.

Land evaluation and site assessment

State, county, and municipal officials face many difficult decisions in choosing land uses that best meet the overall needs and objectives of their communities. Among the most difficult decisions are those concerning the conversion of agricultural land to nonagricultural uses. To help local officials make those decisions, SCS developed the Land Evaluation and Site Assessment (LESA) system.

LESA gives planners a consistent yet flexible system to evaluate land and to determine what conditions justify converting agricultural land to nonagricultural uses. Soil survey information gathered and interpreted by SCS provides technically sound data for the land evaluation part of LESA. For site assessment, local officials identify and rate community development factors that influence the importance of retaining a site in agricultural use. A local committee oversees the use of the LESA system, ensuring that it reflects local values and community development objectives. LESA does not lessen the authority of local officials to make independent land use decisions; it assists them to make those decisions rationally, consistently, and soundly.

Emergency watershed protection (EWP)

SCS provides technical and financial assistance whenever fire, flood, or other natural disaster causes sudden damage in a watershed. To safeguard lives and

property, as authorized by the Secretary of Agriculture, SCS undertakes emergency measures to retard runoff and reduce soil erosion and sedimentation.

Through a network of local representatives, SCS responds immediately to emergencies, helping local officials assess damages and identify needed actions. When an imminent threat to life or property is present, SCS can take remedial action in 1 or 2 days. EWP assistance continues to be available until all hazards are controlled.

Frequently used emergency measures include establishment of vegetative cover, gully control and streambank protection devices, removal of debris and sediment from channels, and emergency repair of existing dams, dikes, and other water control structures.



Seven inches of rain in 4 hours resulted in the devastation of a small rural valley at Brady's Bend, Pennsylvania.



SCS emergency teams used rock riprap and other materials to stabilize and restore the streams.

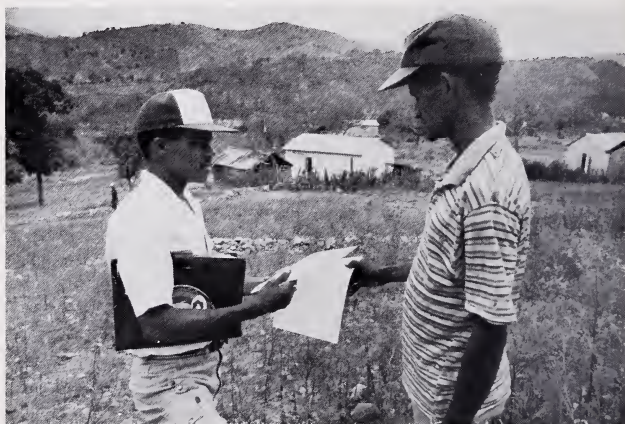
International cooperation

SCS participates in international conservation assistance by assigning technical specialists to foreign projects and by exchanging scientific teams with countries whose agricultural science and technology can benefit the United States. SCS also provides training for foreign visitors, giving them the opportunity to observe SCS activities throughout the United States. In addition, SCS participates in meetings of international technical and professional societies and plans conferences with other agencies involved in international programs.

The objectives of SCS's international role are to:

- Help countries use their natural resources without depleting them.
- Exchange scientific and technological information with countries that have soil and water resource conservation problems similar to those in the United States.
- Contribute to the overall achievement of U.S. foreign policy.
- Increase SCS's technical knowledge and professional capability.

SCS provides technical assistance through USDA-administered agreements with foreign governments, international organizations, and other U.S. Government agencies. Employee assignments that provide technical assistance to foreign countries may be long-term resident assignments or short-term temporary assignments. Resident assignments usually last about 2 years and provide a country with technical services and leadership for a specific natural resource conservation project. Most



In Maerna, Dominican Republic, SCS has provided technical assistance for erosion control projects. Officials work closely with landowners to implement conservation practices.

resident assignments are made in response to a request from the U.S. Agency for International Development.

In addition, each year about 200 students and technicians from developing countries receive conservation training in SCS offices and field locations around the United States. SCS training is confined mainly to the principles and techniques used by the Service in carrying out soil and water conservation programs.

SCS has been actively involved in scientific and technical exchanges with other countries. A fundamental goal of these exchanges is to broaden the capacity of the agricultural community to respond to changing economic and ecological patterns in a world in which natural resources are becoming scarce. Scientific exchanges may be exploratory, they may further develop existing knowledge and scientific expertise, or they may emphasize applied technology rather than pure research. In all cases, exchanges are goal oriented.

Less developed countries need the kinds of technical assistance SCS offers to help them reap the most from their available resources while protecting those resources for future use. SCS seeks to know about worldwide resource development, use, and protection in order to address our own domestic problems more productively. International cooperation makes these goals possible.

For more information about SCS programs and assistance, call or visit the SCS office listed in your local telephone directory under United States Government, Department of Agriculture. All programs and services of the Soil Conservation Service are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status, or handicap.

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